WHAT IS CLAIMED IS:

1. An online poultry reprocessing system, comprising:

a main flow water line;

a bypass line having an inlet connected to an upstream portion of the main flow water line and an outlet connected to a downstream portion of the main flow water line;

a chlorinator having an inlet connected the bypass line outlet and an outlet; and

a solution tank having an inlet connected to the chlorinator outlet and to the bypass line outlet and an outlet, wherein the solution tank outlet is connected to a downstream portion of the main flow water line.

2. The system as claimed in Claim 1 further comprising a water sample line connected to the main water flow line downstream of the downstream portion

3. The system as claimed in Claim 2 further comprising a pH sensor line connected to the main water flow line down stream of the water sample line.

4. The system as claimed in Claim 3 wherein outlets of the water sample line and the pH sensor line are connected to an automated control section.

5. The system as claimed in Claim 4 wherein the control section comprises:

a pH controller connected to the pH sensor line; and

a chlorine flow sensor connected to the water sample line.

6. The system a claimed in Claim 5 wherein the automated control section controls a flow of water into the chlorinator and into the solution tank, and increases the flow into the chlorinator when chlorine in the water sample line falls below a threshold.

7. The system as claimed in Claim 1 wherein the solution tank receives a portion of water from the bypass line and a portion of chlorinated water from the chlorinator.

8. The system as claimed in Claim 1 further comprising pumps connected between the solution tank outlet and the downstream portion of the main flow water line.

9. The system as claimed in Claim 1 wherein the chlorinator comprises:

a generally cylindrical housing having an upper chamber and a lower chamber, the chambers being separated by a sieve plate, wherein the lower chamber has a diameter smaller than the diameter of the upper chamber thereby forming an additional annular cavity around the perimeter of the lower chamber;

a first pipe connected to the lower chamber; and

a second pipe connected to the annular cavity.

10. The system as claimed in Claim 9 wherein the first pipe is connected to the chlorinator inlet and the second pipe is connected to the chemical feeder outlet.

11. The system as claimed in Claim 1 further comprising a float valve located within the solution tank, the float valve controlling the flow of chlorinated water from the outlet of the chlorinator into the solution tank.

12. The system as claimed in Claim 1 further comprising an injection point in the main water line connected at a point downstream of the water sample line and upstream of the pH sensor line.

13. The system as claimed in Claim 12 further comprising an injection pump connected to the injection point.

14. The system as claimed in Claim 13 further comprising a pH adjustment chemical located in the injection pump.

15. The system as claimed in Claim 14 wherein the pH adjustment chemical is sodium bisulfate.

16. The system as claimed in Claim 14 wherein the pH adjustment chemical is citric acid.

17. The system as claimed in Claim 1 further comprising a chlorinating chemical located within the chlorinator.

18. The system as claimed in Claim 17 wherein the chlorinating chemical is calcium hypochlorite.

19. A method of providing super-chlorinated water to a poultry reprocessing system, comprising:

diverting a side stream of water from a main water flow line;

channeling the diverted water through a chlorinator;

injecting water from the chlorinator into the main water flow line; and

sampling water in a downstream location of the main water flow line for chemical levels.

20. The method as claimed in Claim 19 wherein the water sampled from the downstream location is sampled for chlorine levels.

21. The method as claimed in Claim 19 wherein the water sampled from the downstream location is sampled for pH levels.

22. The method as claimed in Claim 19 further comprising optionally injecting additional chlorinated water into the main water flow line.

23. The method as claimed in Claim 19 further comprising optionally injecting a pH adjustment chemical into the main water flow line.